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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,998	03/22/2001	Chihiro Fujisawa	010352	2676

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EXAMINER

YUAN, DAH WEI D

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 03/18/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,998

Applicant(s)

FUJISAWA ET AL.

Examiner

Dah-Wei D. Yuan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

**NICKEL ELECTRODE FOR ALKALINE STORAGE BATTERY AND METHOD OF
MANUFACTURING THE SAME**

Examiner: Yuan

S.N. 09/813,998

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March 6, 2003

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1 and 2, in Paper No. 4 is acknowledged. Claims 3 and 4 are withdrawn from consideration.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Sakamoto et al. (US 6,129,902).

Sakamoto et al. teach an alkaline storage battery having a positive electrode of nickel compound. The positive electrode active material is filled into an electrode substrate, which comprises a three-dimensional foamed nickel (conductive) porous body with high porosity. In one embodiment, Sakamoto et al. teach the positive electrode active material particles having a plurality of layers containing a plurality of metal elements in each layer. Specifically, a

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composite oxide of a plurality of metal elements wherein the inner layer (main active material layer) comprises nickel hydroxide containing cobalt and manganese as solid solution and the surface layer (compound layer) comprises nickel hydroxide containing cobalt, zinc and calcium as solid solution. First, a 2.2 mol/l aqueous nickel nitrate solution, 0.05 mol/l aqueous cobalt nitrate solution, 0.15 mol/l manganese nitrate solution and 4.8 mol/l aqueous ammonia solution are prepared. These solutions are simultaneously fed into the reaction vessel 11. See Figure 2. It is noted that the metal molar ratio of cobalt contained in the main active material layer to nickel contained in the main active material layer is $2.3\% \frac{0.05}{2.2}$, which is in a range of 0.5% to 3.0% inclusive. Subsequently, the resulting particles of an average particle diameter of 12 μm are fed into another reaction vessel 12, which contains 2.2 mol/l aqueous nickel nitrate solution, 0.1 mole/l aqueous calcium nitrate solution, 0.05 mol/l aqueous zinc nitrate solution and 0.05 mol/l aqueous cobalt nitrate solution. As a result, the metal molar ratio of calcium contained in the compound layer to nickel contained in the main active material layer is $4.5\% \frac{0.1}{2.2}$, which is in a range of 0.3% to 5.0% inclusive. In addition, Sakamoto et al. teach the salts of at least one metal element selected from Ti, Sr, Y, Cr and Bi are contained in the second vessel in a larger amount than that in the first vessel. See Column 1, Lines 16-18, 20-27; Column 2, Lines 43-44; Column 18, Line 37 to Column 19, Line 4; Column 20, Lines 1-4.

Allowable Subject Matter

4. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and

$$\frac{0.1 \text{ Ca}}{2.2 + 0.05 + 0.1 + 0.05} = 4.2\%$$

Ni Co Ca Zn

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any intervening claims. Claim 2 would be allowable because the prior art of record does not disclose or suggest the metal molar ratio of the at least one element selected from the group consisting of calcium, aluminum, strontium, scandium, yttrium, and lanthanoide series is at least 20% in the compound layer.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dansui et al. (US 6,033,805) teach a nickel-hydrogen secondary battery having a positive electrode comprising a nickel foil and a powdery substance containing nickel hydroxide as the main constituent and one element selected from the group consisting of Co, Zn, Mn, Ca, Cr, Al and Fe. The amount of the element contained as solid solution is 1-10 mol%.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (703) 308-0766. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Dah-Wei D. Yuan
March 6, 2003

A handwritten signature in cursive script, appearing to read "Dahwei-Y", followed by a long horizontal flourish.